

REMARKS

The Office Action dated September 16, 2009 has been received and carefully noted. The above amendments and the following remarks are being submitted as a full and complete response thereto.

Claims 1-6 are pending. By this Amendment, Figure 4, paragraph 4 on page 14, the paragraph bridging pages 17 and 18, paragraph 1 on page 19, and paragraph 2 on page 20 and Claims 1-6 are amended. Support for the amendments can be found in the fourth paragraph on page 14, the paragraph bridging pages 17 and 18, the third paragraph on page 18, and the first paragraph of page 19 of the original specification. Accordingly, Applicants respectfully submit that no new matter is presented herein.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.83(a) because they do not show the "mode switch means for switching" recited by the pending claims. Applicants enclose herein a Replacement Sheet of drawing Figure 4 which include and properly identify the relevant feature. As mentioned above, support for the amendment to the drawing can be found in the fourth paragraph on page 14, the paragraph bridging pages 17 and 18, the third paragraph on page 18, and the first paragraph of page 19 of the original specification. Accordingly, the Applicants respectfully request withdrawal of the objection to the drawings.

Specification

The Applicant has amended the Specification to include a reference number used to identify a feature discussed therein that is also recited by Claim 1 of the application as originally filed.

Claim Objections

Claims 1-6 are objected to for informalities therein. Applicant has amended the claims in a manner believed to be responsive to the objection. Applicant respectfully requests withdrawal of the objection.

Rejections Based on 35 U.S.C. §112

Claims 1 and 2 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. In particular, the Office Action asserts that specification does not describe "controlling that actuator according to a set value" to enable one of ordinary skill in the art to make or use the invention. Furthermore, the Office Action asserts that the "first control means of controlling the actuator" and "second control means of performing assist control of the actuator" is not enabled because the language invokes 35 U.S.C. § 112, sixth paragraph, but the specification fails to disclose the corresponding structure, material or acts.

Applicants have amended Claims 1 and 2 so that instead of reciting a "set value", the claims now recite "predetermined route." Paragraph four on page 14 of the original specification describes how, "[w]hen a mode changeover switch is switched to the automatic transportation mode, the grip/installation mechanism 6 is automatically moved in a route the teaching of which was performed beforehand..." Furthermore, the second full paragraph on page 18 of the original specification discloses that, "the automatic transportation is performed to a predetermined point near the installation position B according to the set route set in the automatic transportation mode." One having ordinary skill in the art would understand that when the instant invention is operating in automatic mode, the controller of the actuator allows the grip/installation mechanism to follow a predetermined route or set value. Therefore, Applicants

respectfully submit that the "predetermined route" feature of Claims 1 and 2 meet the requirements of 35 U.S.C. § 112, first paragraph.

Applicants have amended the first control means and the second control means to recite a first actuator control means and a second actuator control means in order to clearly indicate that the actuator is being controlled. The first paragraph on page 19 discloses that "a mode of each actuator changes to the assist transportation mode by the control means." Paragraph 4 of page 14 and the paragraph bridging page 17 to 18 describe how the grip/installation mechanisms move automatically or in a way that assists the operator. Furthermore, page 15 of the specification discloses that in the preferred embodiment the actuator is a motor. One having ordinary skill in the art would understand that the first and second actuator control means is a manner of controlling motors. One having ordinary skill in the art would know how to properly control motors because controlling motors is well known in the art. Therefore, Applicants respectfully submit that the first and second actuator control means satisfies the requirements of 35 U.S.C. § 112, first paragraph.

Claims 1-3, 5, and 6 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Office Action rejects the claims for reciting "first control means" and "second control means" for essentially the same arguments as were made under the 35 U.S.C. § 112, first paragraph. For the reasons above, Applicants' respectfully submit that claims, as amended, are in compliance with 35 U.S.C. § 112, second paragraph with regard to the first and second control means.

Claims 1-3, 5, and 6 are also rejected for reciting subject matter lacking in antecedent basis and other indefinite phrases. Applicant has amended the claims in a

manner believed to be responsive to the rejections. Thus, Applicants respectfully submit that Claims 1-3, 5, and 6 are in compliance with 35 U.S.C. § 112, second paragraph.

Rejections Based on 35 U.S.C. §102

Claims 1 and 2 are rejected under 35 U.S.C. § 102(b) as being anticipated by Abe (JP 08282998A).

Claim 1 recites, among other features, a component transportation and installation device which transports and installs an installed component in an installation position of a receiving body, comprising first actuator control means of controlling the actuator of the component transportation means according to a predetermined route; second actuator control means of performing assist control of the actuator of the component transportation means; and mode switch means for switching between the first actuator control means and the second actuator control means, wherein the first actuator control means switches to the second actuator control means any time the mode switch means is actuated and the second actuator control means automatically reverts back to the first actuator control means the instant the mode switch means is no longer being actuated.

The Office Action, on page 8, asserts that Abe discloses all the features of Claims 1 and 2. However, Abe does not disclose that the first actuator control means switches to the second actuator control means any time the mode switch means is actuated and the second actuator control means automatically reverts back to the first actuator control means the instant the mode switch means is no longer being actuated. In other words, Abe does not disclose that the component transportation and installation device switches from an automatic mode to an assisted mode only while the mode

switch means is actuated and reverts back to automatic mode as soon as the mode switch means is no longer being actuated. Rather, Abe discloses that the from point (A) to point (B) the gripping mechanism is in automatic mode. Then, once the gripping mechanism arrives at point (B), it automatically switches to assist mode. The worker controls the gripping mechanism from point (B) to (C), performs his/her work, then manually returns the gripping mechanism to point (B). After returning the mechanism to point (B) the worker activates a switch and the gripping mechanism goes back to automatic and returns to point (A). See paragraphs [0035] to [0038] of the machine translation. Thus, the installation apparatus of Abe can only be in automatic mode from point (A) to point (B) and can only return to automatic mode when a worker returns the grip mechanism to point (B) and activates a button. Applicants submit that the installation of apparatus of Abe does not switch between modes every time the mode switch means is actuated and does not automatically revert back when the mode switch means is no longer being actuated as recited in Claim 1. By allowing the worker to switch from the automatic setting to the assist setting at any time during the installation process the installation becomes simpler and more efficient. See specification pages 2-6.

Claim 2 recites, among other features, that the worker switches between the actuator automatic control step and the actuator assist control step at any time according to a work condition. As detailed above, Abe does not teach that the worker is able switch between the automatic mode and the assisted mode at any time. Rather, Abe teaches that the mode must be automatic from (A) to (B) and must be assisted from (B) to (C).

For at least the above reasons, Applicants respectfully submit that Abe does not anticipate Claims 1 and 2 because it does not disclose or suggest each and every feature recited by Claims 1 and 2. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 1 and 2 under 35 U.S.C. §102(b) over Abe.

Rejections Based on 35 U.S.C. §103

Claims 3 and 4 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Abe (JP 08282998A) in view of Kiyuukazi et al. (JP 2000210824a).

Claim 3 recites, among other features, a step of positioning an installed component in an installing section in an assist mode by actuating a mode control switch; a step of installing automatically; and a step of moving a grip mechanism in an automatic mode, the automatic mode occurring the instant the mode control switch is no longer being actuated.

The Office Action admits that Abe does not disclose installing the positioned installed component automatically. To cure this deficiency, the Office Action cites Kiyuukazi, which discloses automatic positioning of a tire. However, neither Abe nor Kiyuukazi disclose the assist mode occurring by actuating a mode control switch and the automatic mode occurring the instant the switch is no longer being actuated. As abovementioned, Abe teaches the assist mode begins as soon as the component reaches point (B) and does not involve actuation of a mode control switch and the process does not become automatic the instant switch is no longer being actuated. Kiyuukazi discloses a totally automated process. See paragraph [0001] of the machine translation. By having a method to switch from the automatic setting to the assist setting

at any time during the installation process the installation becomes simpler and more efficient. See specification pages 2-6.

Claim 4, recites, among other features, a grip mechanism which can grip the installed component; component transportation means equipped with an actuator for transporting the grip mechanism; and an installation mechanism wherein the operation of the actuator of the component transportation means includes switching between an automatic mode which does not need a worker, and an assist mode which can reduce a worker's burden although a worker's intervention is needed; and a control means performing control to select the assist mode when positioning at least the installed component, wherein the control means selects the assist mode by actuating a mode control switch and wherein the assist mode reverts to the automatic mode the instant the control means stops actuating the mode control switch.

The Office Action admits that Abe fails to teach an installation mechanism. To cure this deficiency, the Office Action cites Kiyuukazi, which discloses automatic installation. However, neither Abe nor Kiyuukazi disclose the assist mode occurring by actuating a mode control switch and the assist mode reverting to the automatic mode the instant the switch is no longer being actuated. As abovementioned, Abe teaches the assist mode begins as soon as the component reaches point (B) and does not involve actuation of a mode control switch and the process does not become automatic the instant switch is no longer being actuated. Kiyuukazi discloses a totally automated process. See paragraph [0001] of the machine translation. By having an installation mechanism that can switch from the automatic setting to the assist setting at any time during the installation process the installation becomes simpler and more efficient. See specification pages 2-6.

For at least the above reasons, Applicants respectfully submit that neither Abe nor Kiyuukazi taken either singly or in combination render obvious Claims 3 and 4 because neither Abe nor Kiyuukazi disclose, suggest, or render obvious each and every feature recited by Claims 3 and 4. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 3 and 4 under 35 U.S.C. § 103(a) over Abe in view of Kiyuukazi et al.

Claims 5 and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Abe (JP 08282998A) in view of Ishihara et al. (JP 09210116 A).

Claim 5 recites, among other features, transporting at least two installed components in a component supply position toward an installation position including gripping the installed components by a grip mechanism while conveying a receiving body, which is given pitch feed, to the installation position sequentially, returning the grip mechanism to the component supply position at a time of completion of installing the installed components in the receiving body comprising the steps of: making the grip mechanism free to perform switching between an automatic mode and an assist mode by actuating a mode control switch, as means of transporting the installed components, and simultaneously; performing switching to an automatic transportation mode after gripping the installed components by the grip mechanism and automatically transporting the installed components; and making the grip mechanism return to the component supply position in the automatic mode wherein the automatic mode occurs every time the mode control switch is not being actuated and wherein the assist mode occurs every time the mode control switch is being actuated; and simultaneously transporting and installing the installed components in the installation position in a stop period of one pitch feed of the receiving body.

The Office Action admits that Abe does not teach conveying the receiving body with pitch feed and installing at least two components in a stop period in one pitch feed. To cure this deficiency, the Office Action cites Ishihara, which allegedly teaches a conveying a receiving body with pitch feed and installing two components in a stop period of one pitch. However, neither Abe nor Ishihara teach that the automatic mode occurs every time the mode control switch is not being actuated and that the assist mode occurs every time the mode control switch is being actuated. As abovementioned, Abe teaches the assist mode begins as soon as the component reaches point (B) and does not involve actuation of a mode control switch and the process does not become automatic every time a mode control switch is no longer being actuated. Ishihara has no teaching of switching between automatic and assist modes. By having an installation method that can switch from the automatic setting to the assist setting at any time during the installation process the installation becomes simpler and more efficient. See specification pages 2-6.

Claim 6 recites, among other features, receiving body transportation means for performing pitch feed of the receiving body; a grip mechanism which grips the installed components in a component supply position; and component transportation means of transporting the grip mechanism at least to an installation position in an automatic transportation mode which does not need a worker, or an assist transportation mode which does not need a worker, or an assist transportation mode which can reduce a worker's burden although a worker's intervention is needed, and returning the grip mechanism in the automatic transportation mode or assist transportation mode to the component supply position when installation is completed, and in that the grip mechanism is controlled so as to transport the at least two installed components in an

installation position in a stop period of one pitch feed of the receiving body, wherein the automatic mode occurs every time a mode control switch is not being actuated and wherein the assist mode occurs every time the mode control switch is being actuated.

The Office Action admits that Abe does not teach a receiving body transportation means for performing pitch feed and that the grip mechanism can transport at least two components in a stop period of one pitch feed. To cure this deficiency, the Office Action cites Ishihara, which allegedly teaches a receiving body transportation means for performing pitch feed and a grip mechanism that can transport at least two components in an installation position in a stop period of one pitch feed. However, neither Abe nor Ishihara teach that the automatic mode occurs every time the mode control switch is not being actuated and that the assist mode occurs every time the mode control switch is being actuated. As abovementioned, Abe teaches the assist mode begins as soon as the component reaches point (B) and does not involve actuation of a mode control switch and the process does not become automatic every time a mode control switch is no longer being actuated. Ishihara has no teaching of switching between automatic and assist modes. By providing an installation apparatus that can switch from the automatic setting to the assist setting at any time during the installation process the installation becomes simpler and more efficient. See specification pages 2-6.

For at least the above reasons, Applicants respectfully submit that neither Abe nor Ishihara taken either singly or in combination render obvious Claims 5 and 6 because neither Abe nor Ishihara disclose, suggest, or render obvious each and every feature recited by Claims 5 and 6. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 5 and 6 under 35 U.S.C. § 103(a) over Abe in view of Ishihara et al.


CONCLUSION

In view of the foregoing, Applicants respectfully request reconsideration of the application, withdrawal of the outstanding objection and rejections, allowance of Claims 1-6, and the prompt issuance of a Notice of Allowability.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, referencing Atty. Docket No. 028359.00003.

Respectfully submitted,

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